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ABSTRACT

The interrelationships between child and family outcomes can best be understood within an ecological perspective of psychological, social, and economic factors. Based on work with a group of early education and intervention projects with a two-generation focus, this paper proposes a conceptual framework for defining and assessing the impact of programs on families. A matrix is developed that relates program goals, objectives, and activities to projected impacts and outcomes. Summary tables of impacts, outcomes, indicators, and measures are given for five overlapping dimensions of family life: (1) child-family relations; (2) family psychosocial environment; (3) family health and nutrition; (4) family resources and support; and (5) family-school-community relations. This analytic tool has utility for program planners and evaluators. Using the matrix in the planning process embeds assessment into the intervention and identifies measurable outcomes related to program goals. Using the matrix in the evaluative process provides a way of analyzing program effects and insuring the relevance and applicability of identified indicators and measures. Five tables and three figures are included. (Contains 54 references.) (LMI)

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**Assessing Family Outcomes in Two-Generation Programs:
Lessons Learned and Future Directions**

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Summary

Parent involvement in education has long been recognized as a key element in children's school success but only recently has attention focused on family strengths as a protective mechanism for children at risk for school failure. Efforts for school improvement that look for optimal ways to help all children achieve success, therefore, must also focus on families, recognizing the critical role they play not only in basic support, but also in the continuing socialization and education of the child. Because child development and family functioning are so closely interwoven, outcomes for families are clearly linked to child outcomes.

The interrelationships between child and family outcomes can best be understood within an ecological perspective of psychological, social and economic factors. From work with a group of early education and intervention projects with a two-generation focus, we propose a conceptual framework for defining and assessing the impact of programs on families. Using a matrix that relates program goals, objectives and activities to projected impacts and outcomes, summary tables of impacts, outcomes, indicators and measures are given for five overlapping dimensions of family life: (1) child-family relations, (2) family psychosocial environment, (3) family health and nutrition, (4) family resources and support, and (5) family-school-community relations.

This analytic tool has utility for program planners as well as program evaluators. Using the matrix in the planning process embeds assessment into the intervention and helps evaluators and program planners identify measurable outcomes related to program goals. Using the matrix in the evaluative process provides a way of analyzing program effects and insuring the relevance and applicability of identified indicators and measures.

Introduction

The mission of the Northwest Regional Educational Laboratory (NWREL) is focused on improving outcomes that lead to the development of resilient individuals. Citizens with high self esteem, social and academic competence, persistence, a sense of control over the environment, an orientation to the future, and a sense of humor will be equipped to meet challenges and become productive members of society. The Laboratory recognizes that positive environmental contexts within families, schools and communities are key ingredients in achieving this goal. The first of these, the family, is the focus of this paper.

NWREL's Child, Family, and Community Program is currently working on a group of early education and intervention programs that recognize the indispensable nature of family involvement in children's education. While none of the programs has been funded with family support as a primary goal, the interdependent relationship between child and family outcomes is acknowledged and components of each program have been designed to help families who are raising children. As a result, it becomes critical to define ways in which programs impact families so that appropriate assessment can be planned. Focusing on both family and child outcomes in these two-generation programs can help agencies with separate institutional and programmatic missions work together to achieve common ends. Based on NWREL's experience with current projects, this paper:

- proposes a conceptual framework for defining family outcomes and identifying the impact of programs on families,
- develops a matrix for relating impacts to family outcomes,
- describes indicators and measures currently in use,
- discusses implications for program evaluation, and
- suggests future directions for improved impact assessment.

Background

Educators have long been aware of the integral role strong families play in the healthy development and learning of children. Today, there is wide acknowledgment that families are the primary institution insuring the well-being of the individual. Yet while there has been a concerted effort to operationalize and measure outcomes for children, there has been no parallel movement to develop family outcomes in a systematic fashion (Collins, 1993).

A national background of interest and endorsement of family support and education programs has set the stage for NWREL's work on family outcomes. The first of the National Education Goals sets the target that, by the year 2000, all children in America will start school ready to learn. Recognition of the importance the child's family plays in achieving this readiness is a key element of the goal. To reach the goal, all parents must have access to the training and support that will aid them in their role as the child's first teacher (*America 2000*, 1991). The goal follows a report from the Early Childhood Task Force of the National Association of State Boards of Education urging school reform in the early years of education that would include new initiatives for parental outreach and family support (Schultz & Lombardi, 1989). As a result, the National Task Force on School Readiness has re-defined school readiness as involving substantially more than children's basic capacities for academic learning and has recommended the mobilization of "caring communities" to increase support for young children and their families (NASBE, 1991).

In a review of national family support and education programs, Heather Weiss (1988) reports a trend of programs moving from providing crisis-oriented treatment for family problems to emphasizing support and preventive early intervention. Following the lead of Head Start, many programs that only provided direct services to children are now providing additional and comprehensive services to their families. And in an effort to make programs more responsive to the needs of families within the context of their communities, programs with top-down administrations based outside the community are being replaced with decentralized programs based directly in the community served.

A primary goal of these family support and education programs is to strengthen families in order to enhance the child rearing environment that children experience. While the focus remains on the child, the reciprocal nature of child and family outcomes is recognized and thus, program goals are also directed toward family members and the family environment. The duality of goals has led to the description of these new efforts as "two-generation" programs that address both the developmental needs of children and the needs of families (Collins, 1993; Smith, Blank, & Bond, 1990). Goals for families often include objectives such as increasing feelings of self-worth and competence, self-sufficiency, and participation in the child's education.

Assumptions The five projects currently underway in NWREL's Child, Family, and Community Program fit the general description of "two-generation" programs in that outcomes are sought for both children and adult family members. The projects make the following key assumptions about children and their families:

- **Family school partnership.** The family has the primary role in the development and nurturance of the child; parents are the most important "first teachers" of their children. Schools are the primary public institution charged with the education and development of children. Student success in school is increased by school and family partnerships (Comer & Haynes, 1991; Epstein & Dauber, 1991).
- **Ecological framework.** Children and their families live and work in a social ecological setting where relationships at school, in the community, and at the workplace interplay with relationships in the family. An ecological approach assumes that children grow and develop within the family not solely as a function of maturation, parent-child interactions or various environmental factors but rather within a context of nested relationships where children play an active role in creating the environment they experience (Belsky, 1981; Bronfenbrenner, 1979).
- **Resiliency.** Protective factors within the family can be identified that increase individual family members' resiliency in the face of risk. For children, these factors include families that: (1) create a caring and supportive emotional climate, (2) have clear and high expectations for behavior, and (3) encourage participation in the life and work of the family (Benard, 1991).
- **Diversity.** There is great diversity in family structure, background, and culture. Families are defined broadly as groups of people who share lives and resources over a period of time and whose members consider themselves to be a family (Landesman, Jaccard, & Gunderson, 1991). There is also great diversity in school and community practices that can support families in helping children to learn and succeed (Powell, 1989).
- **Empowerment.** Every family has its own individual strengths and capabilities that can be built upon to enable families to be in control of their own lives and to mobilize needed resources to attain self-sufficiency. Families are capable of assessing their own needs and determining the most appropriate response to those needs (Cochran, 1992). The failure of families to manifest competence is often due to the failure of social systems to create opportunities for these competencies to be displayed rather than basic deficits within the family (Dunst & Trivette, 1987).

- **Integration.** Stronger families will result from integrated efforts of school and community agencies to provide appropriate and effective services to children and families. Successful programs are comprehensive, flexible, and responsive to family diversity, working with children in the context of their families and communities (Schorr, 1988). Successful integration requires empowering all members of the collaboration, including family representatives, to feel that their efforts and participation are critical to achieving common goals (Kagan, 1991).

Conceptual Framework for Defining Family Outcomes

In NWREL's work, family outcomes are conceptualized as occurring within a social ecological framework where effects between children, their families, schools, and communities are reciprocal in nature. Taken together, outcomes have a cumulative impact on family life. When families help children learn and succeed, children's achievements have a positive effect on family members' feelings of self-worth and well-being. By adopting a partnership relationship, schools and families help each other and share in the responsibility for children's education, resulting in shared successes. Communities that help families to become self-sufficient and achieve a desired quality of life also share in the strength that families then impart to children.

An ecological perspective suggests nested connections between individuals and families, peer groups, and social institutions (Bronfenbrenner, 1979, 1986). External environments influence the functioning of families which, in turn, serve as a primary context for the development of the child. Thus, child outcomes depend not only on what happens within the family and in other settings where children spend time but also on what happens to parents outside the immediate family sphere.

A conceptual model of overlapping spheres of influence has been suggested to explain the interconnections between school and family relationships (Epstein, 1987). We have used overlapping spheres (see Figure 1) to illustrate the reciprocal relationships that exist between child and family outcomes at three differing levels of analysis. The first level centers on individuals in the family and describes parent perceptions, beliefs and behaviors that characterize their views of the parent-child relationship. A second level of analysis focuses on the family system and individual family members' perceptions of the family environment *as a whole* --- the psychosocial functioning, health, nutrition, resources and support available to the family. At a third level, families live and work within an ecology of other systems, at school, in the community, and at the workplace---and the third level of analysis centers on the connections and relationships the family has with schools and community organizations and institutions.

Conceptual Model for Relating Family and Child Outcomes

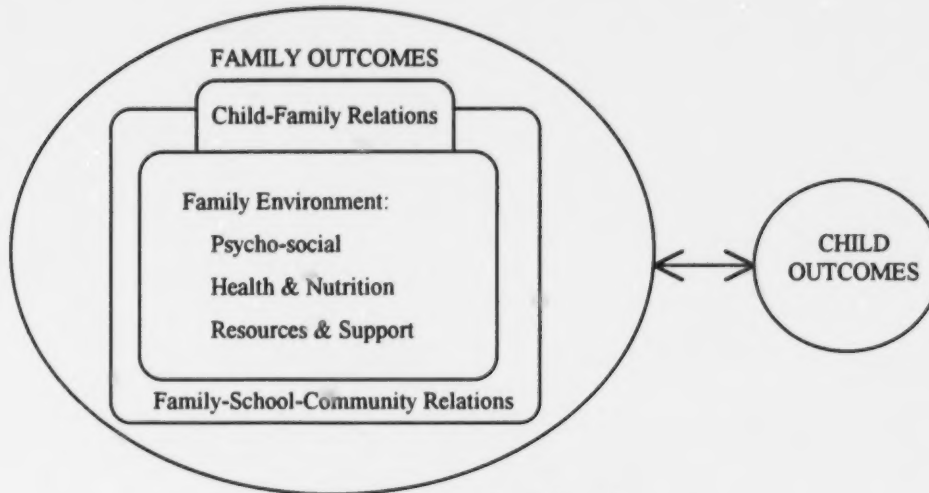


Figure 1

In this model, the family environment, the relationships between children and other family members, and the connections among the family and other social institutions affect child outcomes that, in turn, lead to changes in family functioning, all within the context of a given community. The extent of the overlap of each sphere of influence varies from time to time, partly as a function of time itself, partly as a function of the context, and partly as a function of the behavior and practices within each sphere. For example, parent involvement in school activities and processes tends to decline substantially with each succeeding grade level (Epstein, 1992), resulting in the sphere of family-school relations having less influence on outcomes for older children.

Dimensions of analysis Viewing families ecologically requires the use of multiple perspectives. To define the potential impact of programs on families, we identified the following five dimensions of family functioning where a research base indicates linkages between family and child outcomes:

- (1) **Child-family relationships** refers to the relationships between children and their primary caregivers who, in most cases, are their parents. Programs have an impact on families by promoting positive child-family relationships that, in turn, support the healthy development of children.

For parents, knowledge of healthy child development and parenting skills are key elements in achieving positive relationships (Lamb, Ketterlinus, & Fracasso, 1992; Powell, 1989). Communicating with each other in ways that emphasize positive interactions leads to supportive relationships. Children who experience caring and supportive relationships in the early years tend to be resilient and are less vulnerable to factors of stress, adversity, and risk (Baldwin, Baldwin, & Cole, 1990; Benard, 1991; Rutter, 1990). In the long run, positive child-family relationships can lead to improved child behavior at home and at school, greater school success, and greater social and cognitive competence for the child.

- (2) **The family psychosocial environment** describes the well-being and functioning of the family as a unit. The impact of programs on this dimension is to increase family well-being by enhancing family members' perceptions of self-worth, efficacy and optimism for the future. Decision-making ability is also increased.

Feelings of self esteem and efficacy among family members can buffer the effects of stressful events (Rutter, 1990). These effects spill over into parent-child relations. For example, when mothers feel less efficacious and perceive their lives to be influenced by chance or powerful others, they tend to have lower levels of positive interactions with children (Schaefer, 1991). Strong families typically have a sense of commitment to each other with a clear set of expectations for desired and acceptable behavior and a variety of coping strategies that serve them well in both the good and the bad times (Dunst, Trivette, & Deal, 1988; Stinnett & DeFrain, 1985). Outcomes are more positive when children have a responsible role to play in family life. Children from homes offering greater opportunities for communication and decision-making exhibit greater initiation and independence in school and experience greater success (Epstein, 1983). Family well-being is associated with less family violence, fewer mental health referrals and an increased ability to resist alcohol and other drugs.

- (3) Family health and nutrition refers to the dimension of general healthfulness within the family. The impact of programs is to improve the physical health of family members by increasing family knowledge of safety and healthful practices, changing attitudes about preventative health care and insuring accessibility to necessary health care.

Healthful families experience fewer illnesses. Those who have access to preventative health care are not as likely to need emergency hospital services. Children's oral health problems are the single most common yet preventable health problem if families have access to care. When preventative health care and sound nutrition are available, children's physical growth and development is healthful and age-appropriate (Rosenbaum, 1992). Particularly for high risk families, comprehensive health care programs are linked to positive child outcomes since accidents, injuries, and poisonings are more likely to occur in disrupted families (Kovar, 1991). Schorr (1988) notes that "the costs of unattended malnutrition, anemia, lead poisoning and other health problems show up on the ledgers of social services, education or corrections systems."

- (4) Family resources and support describes the adequacy of basic and social resources available to the family. Programs seek to strengthen families by increasing access to needed resources, resulting in long-term family self-sufficiency. Basic resources include income, housing, food, transportation, time, and child care. Social support comes from others outside the family unit through both formal and informal social networks.

When families lack basic resources, they are less able to cope with adversity (Garmezy, 1991). Families connected to a support network, whether formal or informal in nature, experience less isolation. Parents who have adequate physical and emotional support are better able to respond to their children with consistency and warmth (Cochran & Dean, 1991). Self-sufficient families are able to obtain adequate resources for their family through their own efforts and connections in their social networks. Reduced agency dependency leads to increased feelings of self-worth and dignity and families who are better able to sustain the healthy growth and development of children.

- (5) Relationships between the family, schools and the community constitute the fifth dimension of analysis. Here, the impact of programs is to strengthen families by empowering them to act and advocate for themselves and their children's well-being.

Families benefit when they perceive greater control and effectiveness in their neighborhoods and communities. Increased connections between families, schools and community organizations and institutions result in heightened feelings of competence and motivation. Discrepancies between school and family expectations for children's educational progress are diminished when parents are involved (Tharp, 1989). When parents are involved in a school-family partnership, children are more likely to have a successful school experience (Cochran & Dean, 1991; Comer & Haynes, 1991). Families taking an active role in school and community affairs communicate an important sense of

purpose and efficacy to their children and are better able to procure necessary resources that meet family needs.

Relationship of family outcomes to program goals Programs define their particular vision for social change in their mission statements and further specify their plans in terms of goals, objectives and the activities that deliver the critical elements of the program to the intended recipients. These elements can be considered as rational relationships based on desired social values. Assessment, on the other hand, is based on empirical relationships where such relationships are shown to have actual social benefits.

The starting point for assessing the empirical relationships is first to identify the fidelity with which program activities have been conducted and then to identify one or more specific outcomes resulting from the intervention. Outcomes are operationalized from program objectives and thus provide an empirical test of the program's success. Taken together, a group of outcomes describes empirically the long term impact of the intervention.

When outcomes have been defined, appropriate measures can be identified to yield information that will serve as indicators of change. Indicators and measures then provide the evaluator with a lens to assess both the outcomes themselves and the larger impact that the intervention may have.

We have used a circular model (see Figure 2) to show how program elements that involve rational relationships relate to assessment elements involving empirical relationships. The circularity of the model suggests that, while these relationships are interconnected, they have a non-linear configuration (Nelson, 1992).

Relationship of Rational and Empirical Program Elements

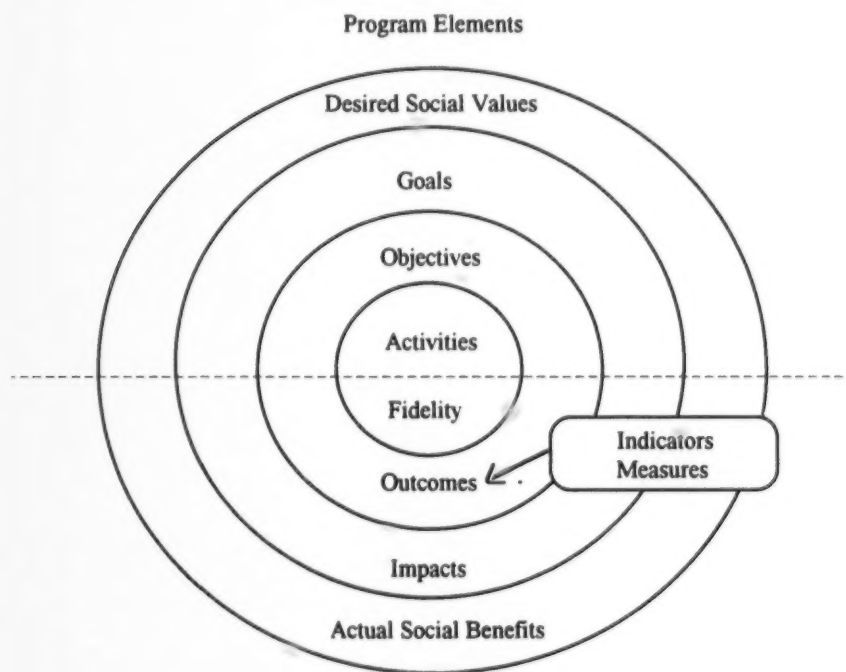


Figure 2

Matrix for defining family outcomes Using this approach, we formed a matrix (see Figure 3) to analyze the definition of family outcomes in relation to our conceptual framework and to the program goals of the five projects. By reviewing these goals, we were able to identify impacts and outcomes for each of the five dimensions of family life in our conceptual framework. In addition, we listed indicators for the outcomes and measurement tools for each indicator currently used by the projects. Many of the outcomes, indicators, and measures used in the five projects overlapped, although there was some variability.

Disentangling the impact of programs on family life requires careful specification of the relationship between program goals and intended effects. From the matrix, we can determine for any given project: (1) the extent to which projected impacts and outcomes accurately reflect project goals and objectives, (2) how comprehensively each set of outcomes assesses the projected impact, and (3) whether indicators provide necessary information about changes in knowledge, behaviors, attitudes, and beliefs. This method of analyzing projected program effects provides a logical linkage between program goals and assessment procedures, insuring the relevance and applicability of identified indicators and measures.

The matrix also can be used as an analytic tool in strategic planning of interventions and assessments. Programs often set ambitious goals. Strategic planning is necessary for programs to refine goals so that indicators of intended changes in family life can be measured. Using this matrix in the planning process embeds assessment into the intervention and helps evaluators and program planners choose goals that will lead to measureable outcomes.

Matrix

Dimesion of Family Life	Program Goals and Objectives	Impacts	Outcomes	Indicators	Measures
Child-Family Relations					
Family Psycho-social Environment					
Family Health & Nutrition					
Family Resources and Support					
Family-School-Community Relations					

Figure 3

For this paper, we have provided an overview of our matrix analysis by integrating the identified impacts, outcomes, indicators and measures for each of the five projects into a comprehensive list for five separate domains of family life. The following tables 1-5 provide a summary of the family impacts, outcomes, and indicators we identified in our analysis. Measures currently being used for indicators are noted, but an evaluation of their psychometric properties including their robustness and sensitivity in assessing the specified family outcomes is beyond the scope of this paper.

Table 1
Summary of Family Impact, Outcomes, Indicators, and Measures
Dimension: Child-Family Relations *

Impact	Outcomes	Indicators	Measures
Positive child-family relationships	Increased family understanding of each child's needs for healthy developmental progress	Identification of developmentally appropriate learning goals for child Congruence between expectations and child's actual characteristics	Family Transition Plan Parent Rating of Importance of Child Qualities Parent Rating of Importance of Child Qualities / Description of Child Qualities Social Skills Questionnaire
	Increased family support of child's healthy development and learning at home	Frequency of parent-child activities Nature of parent-child activities Parenting style	Parent Interview Form Family Routines Inventory Parent Interview Form Family Routines Inventory Parenting Dimensions Inventory
	Improved parenting skills	Perception of adequacy of parenting skills Perception of parenting role Perception of child's behavior Participation in organized parenting activities	Personal Well-Being Index Parent Interview Form Family Interview Form Family Transition Plan Child Adaptive Behavior Inventory Parent Interview Form Parent Interview Form Parent Participation Assessment
	Attainment of goals parent sets for child	Perception of goal attainment	Family Interview Form

* Impacts, outcomes, indicators, and measures are those currently being used in at least one of NWREL's five projects: (1) Early Childhood Education and Assistance Program, (2) Project Imani, (3) Albina Head Start / Portland Public Schools Early Childhood Transition Demonstration Project, (4) School-Based Early Childhood Centers, and (5) Integration of Education and Human Services.

Table 2
Summary of Family Impact, Outcomes, Indicators, and Measures
Dimension: Family Psychosocial Environment

Impact	Outcomes	Indicators	Measures
Increased family well-being and resiliency	Perception of personal and family self-worth strengthened	Perception of personal and family well-being Confidence in family Satisfaction with child's school progress	Personal Well-Being Index Parent Interview Form Parent Health: Depression Scale
	Increased sense of efficacy and control	Perception of efficacy Locus of control	Personal Well-Being Index Parent Interview Form Personal Well-Being Index Parent Interview Form
	Increased skills in decision-making	Identification of family goals Strategies for attaining family goals	Family Interview Form
	Attainment of goals set for self and family	Perception of goal attainment	Family Interview Form
	Improved quality of family life	Adequacy of time for self and family Regularity/stability of family life Number of stressful family events Ability to cope with stressful family events	Family Resource Scale Family Routines Inventory Significant Life Events Checklist

* Impacts, outcomes, indicators, and measures are those currently being used in at least one of NWREL's five projects: (1) Early Childhood Education and Assistance Program, (2) Project Imani, (3) Albina Head Start / Portland Public Schools Early Childhood Transition Demonstration Project, (4) School-Based Early Childhood Centers, and (5) Integration of Education and Human Services.

Table 3
Summary of Family Impact, Outcomes, Indicators, and Measures
Dimension: Family Health and Nutrition *

Impact	Outcomes	Indicators	Measures
Improved health of family members	Family health and safety practices strengthened	Knowledge of child's health status	Parent Interview Form Your Child's Health and Safety
		Use of supportive health and safety practices	Your Child's Health and Safety Health Questionnaire for Teachers
		Hygiene habits	Parent Interview Form Your Child's Health and Safety
		Frequency of physical activity	Parent Interview Form
	Family nutritional practices strengthened	Knowledge of sound nutrition	Parent Interview Form Your Child's Health and Safety
		Well-balanced meals	Parent Interview Form
		Regular breakfast	Your Child's Health and Safety
	Improved accessibility of health care resources	Utilization of needed health, mental health, and dental care	Parent Interview Form Family Transition Plan Your Child's Health and Safety Service Logs
		Linkage with health care system	Parent Interview Form Your Child's Health and Safety
		Health insurance	Parent Interview Form Your Child's Health and Safety
		Adequacy of health resources	Family Resource Scale Your Child's Health and Safety
	Improved family health and nutrition	Child immunizations up-to-date	Parent Interview Form
		Incidence of health problems	Parent Interview Form Your Child's Health and Safety
		Alcohol and/or substance abuse counseling	Parent Interview Form Family Interview Form
		Family nutritional status	Parent Interview Form

* Impacts, outcomes, indicators, and measures are those currently being used in at least one of NWREL's five projects: (1) Early Childhood Education and Assistance Program, (2) Project Imani, (3) Albina Head Start / Portland Public Schools Early Childhood Transition Demonstration Project, (4) School-Based Early Childhood Centers, and (5) Integration of Education and Human Services.

Table 4
Summary of Family Impact, Outcomes, Indicators, and Measures
Dimension: Family Resources and Support *

Impact	Outcomes	Indicators	Measures
Increased family self-sufficiency	Increased family ability to obtain needed resources	Identification of needed resources Utilization of needed social services	Family Interview Form Family Transition Plan Parent Interview Form Family Background Interview Parent Participation Assessment Service Logs
	Improved social support network	Support group membership Frequency and nature of social contacts with friends and relatives Adequacy of social support	Parent Interview Form Family Background Interview Parent Interview Form Family Background Interview Family Routines Inventory Family Resource Scale
	Improvement in basic resources	Adequacy of basic resources (food, income, transportation, shelter, clothing) Adequacy of needed child care	Family Resource Scale Parent Interview Form Family Background Interview Family Resource Scale Parent Interview Form Service Logs
	Increased family independence	Changes in agency dependency	Parent Interview Form Family Background Interview Service Logs

* Impacts, outcomes, indicators, and measures are those currently being used in at least one of NWREL's five projects: (1) Early Childhood Education and Assistance Program, (2) Project Imani, (3) Albina Head Start / Portland Public Schools Early Childhood Transition Demonstration Project, (4) School-Based Early Childhood Centers, and (5) Integration of Education and Human Services.

Table 5
Summary of Family Impact, Outcomes, Indicators, and Measures
Dimension: Child-Family-Community Relations *

Impact	Outcomes	Indicators	Measures
Greater family perception of control and effectiveness in school and community relations	Increased family involvement in child's educational progress	Knowledge of child's school adjustment and progress	Parent Interview Form Family Transition Plan Your Child's Adjustment to School
		Communication with school staff	Parent Interview Form Family Participation in School Activities (Parent & Teacher Versions)
		Participation in school-related activities	Parent Interview Form Family Participation in School Activities (Parent & Teacher Versions)
	Greater connection between family and school approaches to child's education	Continuity between family-school expectations	Social Skills Questionnaire (Parent & Teacher Versions) Importance of Child Qualities (Parent & Teacher Versions)
	Development of sustained individual relationships between family members and school staff	Frequency and nature of contact with school staff	Family Participation in School Activities (Parent & Teacher Versions)
		Changes in family perception of school supportiveness	School Climate Survey
	Increased family involvement in school decision-making processes	Awareness of school environment and climate Participation in school decision-making processes	School Climate Survey Family Participation in School Activities (Parent & Teacher Versions)
	Increased family role in community decision-making processes	Participation in community activities and organizations Participation in design and evaluation of integrated family support services	Parent Interview Form Participation Logs

* Impacts, outcomes, indicators, and measures are those currently being used in at least one of NWREL's five projects: (1) Early Childhood Education and Assistance Program, (2) Project Imani, (3) Albina Head Start / Portland Public Schools Early Childhood Transition Demonstration Project, (4) School-Based Early Childhood Centers, and (5) Integration of Education and Human Services.

Discussion

Because child development and family functioning are so closely interwoven, outcomes for families are clearly linked to child outcomes. When families (1) have clear, reasonable expectations for children's developmental progress, (2) establish a caring, supportive environment and (3) include children in meaningful ways in family life, children experience greater school success (Benard, 1991). Families are better able to provide these elements for their children when they have access to needed economic, social, and health resources.

Parent involvement in education has long been recognized as a key element in children's school success but only recently has attention focused on family strengths as a protective mechanism for children at risk for school failure. Efforts for school improvement that look for optimal ways to help all children achieve success, therefore, must also focus on families, recognizing the critical role they play not only in basic support, but also in the continuing socialization and education of the child.

The interrelationships between child and family outcomes can best be understood within an ecological perspective of psychological, social and economic factors. From work with its child-family-community projects, NWREL has developed a matrix for analysis of program effects in five dimensions of family life, providing a way for family outcomes to be identified in areas related to child resiliency and school success.

Lessons learned from analysis By identifying family impacts and outcomes within an ecological framework of reciprocal influences, we found ourselves better able to specify the effects of programs on families. We discovered that each of the five projects, in its own individual way, was seeking family outcomes intricately linked to child success in school. Outcomes defined for each of the five projects were comprehensive in relation to individual programmatic goals. But when viewed as an entire set, we found areas that could be considered as "gaps" in providing a comprehensive definition of family impacts and outcomes in two-generation programs.

Degree of child involvement in life and work of family. None of the projects we reviewed chose to measure the degree of participation the child has within the life and work of the family, a factor that has been related to resiliency. Indicators of responsibilities and self care routines relating to family encouragement of child maturity would be an appropriate addition to this set.

Family strengths. While family well-being is tangential to resiliency, other aspects of intra-family functioning have also been shown to be protective for children: cohesion and adaptability, family warmth, and an absence of conflict (Rutter, 1990). In addition, having a clearly defined set of family rules, values and expectations about acceptable and desired behaviors has been associated with resiliency in children. Indicators relating to family strengths would increase the comprehensiveness of this set of outcomes.

Wide cultural and subcultural variations among families make assessment of these processes problematic. Several of NWREL's projects identify attainment of family goals as an outcome. Using goal attainment scaling is a promising strategy that recognizes variations in family functioning and focuses on aspirations identified by the family as important to their well-being instead of an absolute measure of optimal family functioning.

Strategies to improve basic resources. Indicators provide necessary information about family identification and utilization of needed resources but none of the programs collected information on strategies families might use to improve the adequacy of basic resources. Focusing on strategies could provide important information about family empowerment.

Social support systems. Indicators of social support have received somewhat less attention in this set of outcomes. Assessment of membership in the support group network is limited to neighborhood and community groups although research suggests that informal networks that include neighbors, friends and relatives play a critical role in providing social support to families (Cochran, 1990).

While an indicator provides information on the adequacy of social support, no differentiation is made among different forms support may take. Support is often divided into emotional, material and informational categories. These various types of social support may be differentially related to family self-sufficiency. In the current set, measurement of social support centers on emotional support. Gathering information about other types of support might make the set more comprehensive in assessing family self-sufficiency.

Knowledge of community organizations and institutions. Outcomes in this set focus on family-school relationships, reflecting the orientation of NWREL's five projects. As collaborations between schools and family support agencies become more common, programs that emphasize strengthening family support systems might be interested in additional indicators that would provide information on family knowledge of support systems in the community, and family perceptions of the supportiveness and the accessibility of community organizations.

Implications for program evaluation Disentangling the impact of programs on family life requires careful specification of the relationship between programs and their effects. There are two major ways that the matrix identified in this paper can be of use in planning and designing program evaluations:

- Relating program goals, objectives, and activities directly to projected impacts and outcomes, with their respective indicators and measures, offers a way of analyzing program effects and insuring the relevance and applicability of identified indicators and measures.
- The comprehensiveness of any given set of family outcomes specified for a program can be evaluated by considering how completely five separate but ecologically interrelated dimensions of family life are covered.

We believe this matrix has utility as an analytic tool in strategic planning of interventions and assessments. Programs often set ambitious goals. Strategic planning is necessary for programs to refine goals so that indicators of intended changes in family life can be measured. Using this matrix in the planning process embeds assessment into the intervention and help evaluators and program planners relate goals to measurable outcomes.

Assessment of indicators. Using this matrix can help evaluators identify pivotal variables that would profit from special methodological attention. Data collection takes place during interviews that typically last from thirty minutes to one hour. When large amounts of data need to be collected, questions relating to a given indicator may be limited to a single item. The content of that particular item then defines the indicator, which in turn, may not be the best predictor of an outcome. But if analysis shows that the indicator is pivotal to a hypothesized outcome, it can be measured in greater depth.

Many of the indicators in this set depend on the perceptions of the parent or caregiver, usually the mother, who participates in the interview process. Direct observation of family functioning is extremely difficult for evaluators to undertake, due to both practical and ethical considerations. Using self-report data is a realistic approach, given the time and resources that are typically available, but issues relating to family privacy limit types of questions that can be asked.

A relatively new trend in family assessment is the use of a technique where individuals respond to different versions of the same instrument, the first asking for ratings of the occurrence of behaviors and the second, asking for an indication of how important the individual judges those behaviors or characteristics to be (Buehler, 1990). In several of NWREL's projects, this technique has been used to

measure the congruence between parents' expectations for ideal characteristics and perceptions of a child's actual characteristics. Using congruence as an indicator is likely to provide information less biased by social desirability and more responsive to family diversity than might be found by asking parents to rate their children's qualities directly.

Future directions As education moves beyond a strict child-development model and begins to place more emphasis on two-generation programs that view community support for family life as a necessary condition for children's success in school, programs will be expected not only to have a major impact on child outcomes but also to affect family functioning and resources. Therefore, family assessment will become a key component of program evaluation.

Defining additional outcomes. In this paper, we have identified a set of pivotal family outcomes that are related to child resiliency and school success. While this set of outcomes and indicators comprehensively reflects the goals and objectives of NWREL's five projects, gaps have been noted. Identifying and adding outcomes and indicators in these and other areas would make the set more complete. Then, when using the set, planners could insure that program activities could be undertaken that might lead to sought after changes.

Identifying additional assessment techniques. Practical and ethical considerations dictate that most indicators of family outcomes be measured through the means of self-report data gathered in interviews rather than direct observation of actual practices. Therefore, it is especially important that assessment instruments are sensitive to changes in attitudes, beliefs and perceptions. Scales that ask for dual responses (ratings of actual and ideal conditions) to the same item are thought to provide a better means of estimating levels of satisfaction since, in addition to having the potential for reducing socially desirable responses, they are reflective of the individuality of family values and beliefs (Buehler, 1990). Thus, designing interview protocols to include more dual response scales may be a productive direction to pursue in the future.

Wide cultural and subcultural variations in family life make it problematic to measure family outcomes using assessment tools with scales that have been standardized on dissimilar populations. A more promising strategy that recognizes variations in family functioning may be assessing outcomes through goal attainment scaling. Using these procedures, families identify goals and assessment focuses on each individual family's progress toward the goals measured by their strategies, resources and individual experiences (Landesman, Jaccard, & Gunderson, 1991).

Assessing empowerment. A common thread in two-generation programs is an emphasis on the empowerment process that leads to families gaining more control over their own lives. Assessing empowerment is challenging. Although there are outcomes along the way, empowerment is conceptualized as a long-term process of adult development gradually leading to more positive perceptions of the self, new relationships with others, and social action on the child's behalf (Cochran, 1992). By analyzing the process, it may be possible to distinguish steps as families move from levels of relative powerlessness to levels where they initiate actions and gain leadership roles in the community. Intermediary outcomes could be identified and family progress along a continuum could be documented.

Developing qualitative methods for assessment. Finally, Cochran (1992) reports wide consensus that qualitative methods, such as case studies, focus groups, participant observations and in-depth, open ended interviews are more effective in documenting the empowerment process than questionnaires or standardized tests. He also notes that participatory-evaluation models, where program recipients are involved in information collection, data analysis, and interpreting results to appropriate sources are in themselves empowering. Feedback from the evaluation process develops an awareness in the individual of the steps in the empowerment process and gradual self-confidence as involvement grows. Thus, participation breeds knowledge that leads to greater empowerment.

A portfolio assessment procedure, typically used to document children's progress in early childhood settings, might provide an especially effective way to study the empowerment process. Portfolio assessment depends upon a clearly delineated set of objectives that could be defined as steps in the empowerment process. Program recipients who were directly involved in assembling portfolio materials might gain information about the steps and, by monitoring their own activities, would receive important feedback on their progress.

In conclusion This paper has provided a conceptual framework for defining and assessing the impact of programs on families within five dimensions of family life. The matrix that relates program goals, objectives and activities to projected impacts and outcomes has proved to be extremely useful in (1) specifying relationships between program goals and intended consequences and (2) analyzing the relevance and applicability of identified indicators and measures. It is our belief that an outcomes assessment of this nature should be of high priority in planning and designing both programs and evaluations.

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